



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 4350  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,334	12/31/2003	John Colgrove	5760-15000	9886
35690	7590	02/13/2006		
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.				
P.O. BOX 398				
AUSTIN, TX 78767-0398				
EXAMINER				
MOAZZAMI, NASSER G				
ART UNIT				
PAPER NUMBER				
2187				

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,334	<b>Applicant(s)</b> COLGROVE ET AL.	
	<b>Examiner</b> Nasser G. Moazzami	<b>Art Unit</b> 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 11-22, 25, 26, 29-36, 39, 40 and 43-47 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9, 10, 23, 24, 27, 28, 37, 38, 41 and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/31/04 &amp; 4/11/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. Information Disclosure Statement submitted by applicant on 05/31/2004 and 04/11/2005 has been considered by examiner. See attached PTO-1449.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 8, 11-20, 29-34, 40, and 43-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Sitka (US Patent No. 6,330,572).

As per claims 1, 8, and 11-17, Sitka discloses a system comprising: a processor; and a memory comprising program instructions, wherein the program instructions are executable by the processor to implement **[computer-implemented system for storing files comprising a processor that is programmed to assign files to filesets (column 6, lines 42-51)]**: file system software configured to: assign and migrate data in

Art Unit: 2187

a multi-class file system comprising a plurality of storage classes **[hierarchy of storage media (column 1, line 32)]**; provide access to the data in the multi-class file system to one or more applications; and migrate data that has not been modified for a given time interval from a first storage class of the plurality of storage classes to a second storage class of the plurality of storage classes **[if users do not request a particular file for an extended period of time, the system automatically migrates the file to the longer-term storage media (column 1, lines 42-48)]**, wherein the data is not modifiable by the one or more applications while the data is on the second storage class **[it is embedded in the reference that when data or file is in the slower storage and it is needed, it will be moved up to the faster storage device to be updated, therefore, when the data is in the slower memory would not be modified (column 1, lines 55-57)]**; and a backup mechanism configured to back up the second storage class less frequently than the first storage class **[migration and backup (column 26, line 28 through column 27, line 4)]**.

As per claims 18-20, 29-34, 40, and 43-47, claims 18-20, 29-34, 40, and 43-47 encompass the same scope of the invention as those of claims 1, 8, and 11-17. Therefore, claims 18-20, 29-34, 40, and 43-47 are rejected for the same reasons as stated above with respect to claims 1, 8, and 11-17.

4. Claims 1, 8, 11-20, 29-34, 40, and 43-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Greenbelt (US Patent Application Publication No. 2005/0033757).

As per claims 1, 8, and 11-17, Greenblatt discloses a system comprising: a processor; and a memory comprising program instructions, wherein the program instructions are executable by the processor to implement: file system software configured to: assign and migrate data in a multi-class file system comprising a plurality of storage classes **[the storage resources may be hierarchically organized based upon costs, speed, capacity, and other factors (page 1, paragraph 0012)]**; provide access to the data in the multi-class file system to one or more applications; and migrate data that has not been modified for a given time interval from a first storage class of the plurality of storage classes to a second storage class of the plurality of storage classes **[when a migration operation is performed, a portion of the file is migrated or moved from an original volume to a repository storage location (page 3, paragraph 0040)]**, wherein the data is not modifiable by the one or more applications while the data is on the second storage class **[when a request is received to access the migrated file, a recall operation is performed and the migrated file is recalled or moved from the repository storage location (page 4, paragraph 0043)]**; and a backup mechanism configured to back up the second storage class less frequently than the first storage class **[migration and backup]**.

As per claims 18-20, 29-34, 40, and 43-47, claims 18-20, 29-34, 40, and 43-47 encompass the same scope of the invention as those of claims 1, 8, and 11-17. Therefore, claims 18-20, 29-34, 40, and 43-47 are rejected for the same reasons as stated above with respect to claims 1, 8, and 11-17.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3, 6-7, 21-22, 25-26, 35-36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sitka in view of Bolan (US patent No. 6,317,747).

As per claims 2-3, and 6-7, Sitka discloses the claimed invention including having a hierarchical storage and migrating data from one storage to another based on different factors, including frequency of use, but fails to specifically teach migrating data that has not been modified for a longer given time period from the second storage class to a third storage class of the plurality of storage classes, wherein the data is not modified by the one or more applications while the data is on the third storage class; and wherein the backup mechanism is further configured to backup the third storage class less frequently than the second storage class.

Bolan discloses storage system having a number of storages, wherein data are compressed and migrated to the next level of storage hierarchy **[abstract; and column 1, line 23 through column 2, line 19]**.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the current invention to have a hierarchy of storage devices as being taught by Bolan into Sitka's system in order to have a more efficient storage system.

Art Unit: 2187

As per claims 21-22, 25-26, 35-36, and 39, claims 21-22, 25-26, 35-36, and 30 encompass the same scope of the invention as those of claims 2-3, and 6-7. Therefore, claims 21-22, 25-26, 35-36, and 39 are rejected for the same reasons as stated above with respect to claims 2-3, and 6-7.

***Allowable Subject Matter***

7. Claims 4-5, 9-10, 23-24, 27-28, 37-38, and 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G. Moazzami whose telephone number is (571) 272-4195. The examiner can normally be reached on 7:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2187

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**  
02/06/2006